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# AMENDMENTS TO THE SPECIFICATION:

Please delete the word "Description" at page 1, line 1.

Please add the following centered heading at page 1, line 5:

#### TECHNICAL FIELD

Please add the following centered heading at page 1, line 26:

## **BACKGROUND**

Please add the following centered heading at page 4, line 24:

#### **SUMMARY**

Please add the following centered heading at page 5, line 8:

## **DETAILED DESCRIPTION**

Please replace the Abstract on page 22 with the following new Abstract:

A piezoelectric ceramic material and a method for producing the piezoelectric ceramic material are disclosed. The piezoelectric ceramic material has the general composition ABO<sub>3</sub>. The piezoelectric ceramic material includes lead zirconate titanate and has a perovskite lattice structure, in which A stands for A positions and B stands for B positions in the crystal lattice.

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Please delete the phrase "Piezoelectric Ceramic Material, Multilayer Component, and

Method for Producing Said Ceramic Material" at page 22, line 3.

Please replace the paragraph beginning at page 1, line 6 with the following amended

paragraph:

The invention relates to a A piezoelectric ceramic material and a method for producing

the piezoelectric ceramic material are disclosed. The piezoelectric ceramic material has having

the general composition ABO<sub>3</sub>, which essentially contains lead zirconate titanate and has a

perovskite lattice structure, in which A stands for A positions and B stands for B positions in the

crystal lattice. The invention further relates to a method for producing this ceramic material.

Please replace the paragraph beginning at page 4, line 25 with the following amended

paragraph:

The object of the invention is to disclose a A ceramic material of the above-described

type that is especially well suited for use in multilayer ceramic components, and which will

ensure a diminished dielectric loss L thus ensuring a low temperature increase in the multilayer

components over long-term use while at the same time ensuring adequate deflection S3 is

disclosed.

Please delete the paragraph staring with "The object of the invention ..." at page 5, line 4.

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Please replace the paragraph beginning at page 5, line 9 with the following amended

paragraph:

The ceramic material of the invention is characterized by a composition that contains at

least a proportion of lead zirconate titanate of the general formula  $Pb_{1-3x/2-y/2}SE_x\Box_{x/2}$ .

v/2Cu $^{1}_{v}$ (Zr<sub>0.5515-z</sub>Ti<sub>0.4485+z</sub>)O<sub>3</sub>, wherein 0.01 < x < 0.04 and 0 < y < x/2. The parameter z can have

any value between -0.15 < z < +0.15, preferably -0.016 < z < 0.0205. SE stands for a rare-earth

metal, selected from the group La, Nd, Sm, Gd, Tb, Dy, Ho, Er, Tu, Yb, Lu and Y. The

parameter x is determined by the valence of the rare-earth metal. The ratio Zr/Ti given by the

parameter z is selected based upon the copper content, i.e. upon the parameter y, such that the

ceramic material is tailored in terms of its phase state (in the phase state diagram) to the

morphotropic phase boundary.

Please replace the paragraph beginning at page 5, line 24 with the following amended

paragraph:

In some embodiments, the context of the invention the phase boundary is not necessarily

narrowly defined, rather in the phase state diagram it can correspond to a morphotropic phase

range, for example between two defined crystal modifications.

Please replace the paragraph beginning at page 5, line 29 with the following amended

paragraph:

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According to the invention In some embodiments, the insertion of the divalent Cu2+

cation in the B positions of the ceramic lattice is prevented for the reasons enumerated below.

Even after sintering of the ceramic mass the copper remains monovalent.

Please replace the paragraph beginning at page 8, line 1 with the following amended

paragraph:

The invention will be Exemplary embodiments are described in greater detail below. with

reference to an exemplary embodiment.

Please replace the paragraph beginning at page 15, line 11 with the following amended

paragraph:

Multilayer piezoelectric components (actuators), for example piezo stacks having several

hundred copper-containing internal electrodes, that are based upon the ceramic masses disclosed

herein of the invention, are produced according to standard methods of printing the ceramic

layers with a copper paste, stacking the printed ceramic layers, laminating them, debindering

them, and sintering them.